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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/508,971

11/10/2004

Akihiko Yoshida

L79990.04103

1131

7590

05/16/2006

EXAMINER

LEWIS, BEN

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Washington, DC 20036

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

10/508,971

Applicant(s)

YOSHIDA ET AL.

Examiner

Ben Lewis

Art Unit

1745

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 31 March 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: _____.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____.
13. ☐ Other: _____.

PATRICK JOSEPH RYAN
SUPERVISORY PATENT EXAMINER

Continuation of 11. does NOT place the application in condition for allowance because: : With regard to the showing of motivation for the obviousness rejection of claim 1: Alternatively, it would have been obvious to one of ordinary skill in the art to adjust the thickness of said fabric, the height of said warp thread and the width of said weft thread of the gas diffusion layer fabric because Hirahara et al teach the use of fibers whose dimensions fall within the range of the instant application since the fibers of Hirahara et al satisfy the equation of the instant application of $1.4 \leq X/Y \leq 3.5$ as shown in the previous office action.

Furthermore, Hirahara et al teach that the thickness of the conductive carbonaceous-fiber sheet is from 0.05 to 1 mm. In case where the thickness of the sheet is smaller than 0.05 mm, the sheet has too low a tensile strength and it is difficult to secure a bending resistance as determined by the 45.degree. Cantilever method of 6 cm or higher. Conversely, in case where the thickness of the sheet exceeds 1 mm, the sheet has reduced gas-diffusing properties. Moreover, use of such too thick a sheet in fuel cell fabrication gives a membrane electrode which is too bulky and, hence, results in a fuel cell having a reduced output per unit volume. The thickness of the conductive carbonaceous-fiber sheet is preferably from 0.1 to 0.5 mm. (Paragraph 0018). Also, changing the warp and weft density affects the porosity and diffusion properties of the gas diffusion layer.

With regard to the the calculations not accounting for the reality of manufacturing a gas diffusion layer fabric of the instant application the Examiner submits that Hirahara et al teach that the spaces between warps and wefts "distance X between adjacent intersections" preferably have a size of from 10 to 150 um in terms of the diameter of corresponding pores as measured with a scanning electron microscope, from the standpoint of securing water-holding/water-releasing properties during use "finished post baked product" as a gas diffusion material in PEMFCs (Paragraph 0047).